

## AMENDMENTS TO THE CLAIMS

Cancel claims 4, 7, 8, 15-19, 21, 24, 27, 29-40, 42 and 44-47 without prejudice.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method comprising:

performing at least part of a digital subscriber line handshaking process by transmitting at least one handshaking signal via a telephone subscriber loop; and

analyzing the at least one handshaking signal to detect ~~a characteristic~~ an estimated length of the telephone subscriber loop.

2. (currently amended) The method of claim 1, further comprising:

determining an operating function of an item of terminal equipment connected to the telephone subscriber loop based at least in part on the ~~detected characteristic~~ estimated length of the telephone subscriber loop.

3. (original) The method of claim 2, wherein the determining includes determining whether to perform trellis coded modulation in the item of terminal equipment.

4. (canceled)

5. (currently amended) The method of claim ~~[[4]]~~ 3, wherein it is determined not to perform trellis coded modulation in the item of terminal equipment if the estimated length of the telephone subscriber loop is less than a predetermined length.

6. (original) The method of claim 5, wherein the item of terminal equipment is a digital subscriber line modem.

7-8. (canceled)

9. (currently amended) The method of claim 1, wherein the analyzing to detect the estimated length of the subscriber telephone loop includes comparing a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers.

10. (currently amended) The method of claim 9, wherein the analyzing to detect the estimated length of the subscriber telephone loop also includes comparing a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers, wherein each signal carrier of the first group of downstream signal carriers is at a higher frequency than each signal carrier of the second group of downstream signal carriers.

11. (currently amended) The method of claim 1, wherein the analyzing to detect the estimated length of the subscriber telephone loop includes comparing a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers, wherein each signal carrier of the first group of downstream signal carriers is at a higher frequency than each signal carrier of the second group of downstream signal carriers.

12. (currently amended) The method of claim 1, further comprising:

determining, based at least in part on the ~~detected characteristic~~ estimated length of the telephone subscriber loop, a parameter for a digital subscriber line training process.

13. (original) The method of claim 12, wherein the determined parameter is used for one of (a) an equalizer function, (b) a timing recovery function, and (c) an automatic gain control function.

14. (currently amended) The method of claim 1, further comprising:

predicting a digital subscriber line service data rate for the telephone subscriber loop on the basis of the ~~detected characteristic~~ estimated length of the telephone subscriber loop.

15-19. (canceled)

20. (currently amended) An apparatus comprising:

a memory;

a processor coupled to the memory to:

receive at least one handshaking signal transmitted via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

analyze the at least one handshaking signal to detect ~~a characteristic~~ an estimated length of the telephone subscriber loop.

21. (canceled)

22. (currently amended) The apparatus of claim ~~21~~ 20, wherein the processor is also to determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

23. (currently amended) An apparatus comprising:

means for receiving at least one handshaking signal transmitted via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

means for analyzing the at least one handshaking signal to detect ~~a characteristic~~ an estimated length of the telephone subscriber loop.

24. (canceled)

25. (currently amended) The apparatus of claim ~~24~~ 23, further comprising:

means for determining not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

26. (currently amended) An apparatus comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

receiving at least one handshaking signal transmitted via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

analyzing the at least one handshaking signal to detect ~~a characteristic~~ an estimated length of the telephone subscriber loop.

27. (canceled)

28. (currently amended) The apparatus of claim ~~27~~ 26, wherein the instructions stored on the storage medium, when executed by a machine, also result in:

determining not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

29-40 (canceled)

41. (currently amended) A system comprising:

a radio frequency transceiver; and

a digital subscriber line modem coupled to the radio frequency transceiver, the digital subscriber line modem including:

a memory;

a processor coupled to the memory to:

receive at least one handshaking signal transmitted via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

analyze the at least one handshaking signal to detect ~~a characteristic~~ an estimated length of the telephone subscriber loop.

42. (canceled)

43. (currently amended) The system of claim 42 41, wherein the processor is also to determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

44-47. (canceled)